

**DEPARTMENT OF TRANSPORTATION**

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch  
690 Walnut Ave.St. 150  
Vallejo, CA 94592-1133  
(707) 649-5453  
(707) 649-5493

Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:** Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-002268**Date Inspected:** 06-May-2008**Project Name:** SAS Superstructure**OSM Arrival Time:** 1500**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 2230**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai China**CWI Name:** See observations below**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** Tower skin plates**Summary of Items Observed:**

Caltrans Quality Assurance Inspector Mr. David Kelsey (Caltrans QA Inspector) arrived at Shanghai Zhenhua Port Machinery Co (ZPMC) to observe the ZPMC Quality Control Inspectors noted below perform the duties and responsibilities as outlined in the Welding Quality Control Plan (WQCP), Contract Special Provisions and to randomly inspect the in-process welding fabrication at ZPMC fabrication facility for the Orthotropic Box Girder (OBG) and Tower bridge structural components.

The Caltrans QA Inspector performed in-process visual inspection on the Shielded Metal Arc Welding (SMAW) process tack welding & fit-up on WT Stiffeners to the OBG bottom plates BP114-001 & FCAW minor repairs to fillet welds on SP094-001 in Bay#3. QA Inspector randomly observed the ZPMC CWI Mr. Wu Ming Kat monitoring welding voltage, pre-heat & interpass temperatures & cleaning, weld pass width, profile/size and travel speed per approved WPS-B-P- 2112 & WPS-345-FCAW-2G (2F).

The Caltrans QA Inspector performed in-process visual inspection on the submerged arc welding (SAW) process welding on Tower skin plates ESDI SA227 A/H-15B & SA77 A/E- 43F weld splice in Tower shop Bays# 1 & 2. QA Inspector randomly observed the ZPMC QC/CWI Mr. Au Jing Xiangm (Bay 1) and Zhu Zhong Hai (Bay 2) along with four CAWI monitoring welding voltage, pre-heat & interpass temperatures & cleaning, weld pass width, profile/size and travel speed per approved WPS-B-T-3221-B-U3c-S-1.

The Caltrans Inspector observed weld root thermal air carbon back-gouging in progress on OBG I-Beam weld splices Bay# 3.

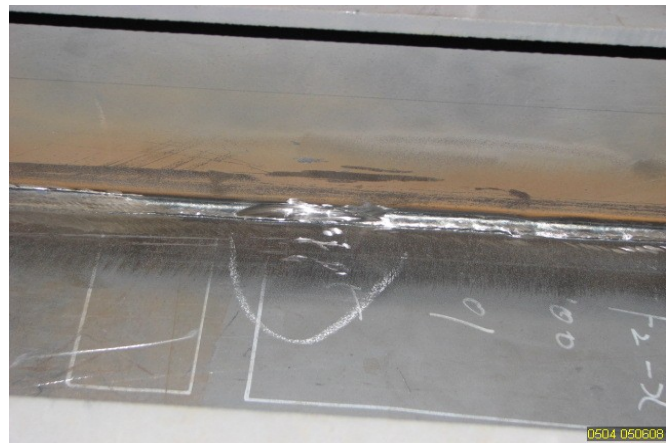
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The Caltrans Inspector observed thermal cutting and heat straightening on various skin plates in tower shop Bay 1 & 2.

The Caltrans Inspector observed Magnetic Particle Testing by ZPMC technicians on skin plates in tower shop Bay 2 SA49A welds D-27A, D20A and SA233 A/F weld 22A.

The in-process welding, fit-up & joint preparation, MT inspection, and back-gouging observed by the Caltrans Inspector appears to comply with previously mentioned WPS, the approved drawings, the WQCP, Contract Special Provisions and AWS welding code D1.5. See attached pictures below in numeric order from left to right & top to bottom.



Item	Description	WBS	Dwg No.	Status
1	Picture 1 CWI Au Jing Xangm monitoring & recording welding current parameters on tower skin plates			
2	Picture 2 Pre-heating of weld joint in tower shop (Typical)			
3	Picture 3 Typical minor VT indications (slag etc) marked by CWI prior to subsequent weld passes be applied. (later ground and removed)			

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4 Picture 4

Typical excavations & repair of VT indications on GMAW fillet welds to the WT stiffeners on SP094-001

### Summary of Conversations:

General information conversations only to do with the previously mentioned work.

### Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Mazen Wahbeh, (818) 292-0659, who represents the Office of Structural Materials for your project.

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<b>Inspected By:</b>	Kelsey,David
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Quality Assurance Inspector
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<b>Reviewed By:</b>	Cochran,Jim
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QA Reviewer
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